



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,490	08/09/2001	Tim Wollaston	540-318	3474

7590 08/13/2002

NIXON & VANDERHYE P.C.  
8th Floor  
1100 North Glebe Road  
Arlington, VA 22201-4714

EXAMINER

SWIATEK, ROBERT P

ART UNIT	PAPER NUMBER
----------	--------------

3643

DATE MAILED: 08/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/924,490

Applicant(s)

WOLLASTON ET AL.

Examiner

Robert P. Swiatek

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,13,14,16,18,20,32,33 and 37-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,13,14,18,20,37-39,41,43,45,50,52,54,56,57,59 and 66 is/are rejected.
- 7) ☒ Claim(s) 16,32,33,40,42,44,46-49,51,53,55,58 and 60-65 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 3643

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by the article "Friction Stir Process Welds Aluminum Alloys" by Dawes et al. (reference cited on Information Disclosure Citation filed 21 January 1999 in parent application S.N. 09/212,569). Page 45 of the Dawes et al. article anticipates the use of friction stir butt welding for the fabrication of "Airframes, fuel tanks and attachment of special alloy skins."

Claims 13, 18, 38, 52 are rejected under 35 U.S.C. 102(b) as being anticipated by the Dawes et al. article. The Dawes et al. article discloses airframe components (see Table 2 on page 45 of the reference) fabricated through friction stir welding.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ellzey (3,023,860) in view of Thomas et al. (5,460,317). The Ellzey patent discloses an aircraft body construction wherein standard welds (see Figure 12 of Ellzey) are employed to join two overlapped components A', B' together along a curved line. The patent to Thomas et al. relates to a method of friction stir welding,

Art Unit: 3643

the specification noting that friction stir welding creates a plasticized region about a rotating probe, which plasticized region subsequently solidifies to monolithically join two elements. It would have been obvious to one skilled in the art to eliminate the overlapped, welded portions of the airframe components A', B' of Ellzey and instead join them together by the friction stir butt welding technique disclosed in the Thomas et al. patent, in order to create monolithic, high-strength bonds between adjoining sections. Essentially one skilled in the art would recognize the superiority of the friction stir welding process, which produces monolithic joints, over traditional welding techniques and eliminate the old welds in favor of the new. It is noted that Ellzey recognizes that the welds employed to join his components "may not only vary in character [but] be of different types" (see column 5, lines 19, 20, of Ellzey), thus recognizing the need for flexibility and opening the door to new and superior welding processes.

Claims 13, 14, 18, 20, 37-39, 41, 43, 45, 50, 52, 54, 56, 57, 59, 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellzey in view of Thomas et al. It would have been obvious to one skilled in the art to eliminate the overlapped, welded portions of the airframe components A', B' of Ellzey and instead join them together by the friction stir butt welding technique disclosed in the Thomas et al. patent, in order to create monolithic, high-strength bonds between adjoining sections.

Claims 16, 32, 33, 40, 42, 44, 46-49, 51, 53, 55, 58, 60-65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3643

Applicants' arguments filed 28 May 2002 have been fully considered but they are not persuasive. Claims 1, 13, 14, 18, 20, 37-39, 41, 43, 45, 50, 52, 54, 56, 57, 59, 66 are not believed allowable for the reasons set forth above.

Summary: Claims 2-12, 15, 17, 19, 21-31, 34-36 have been canceled; claims 1, 13, 14, 18, 20, 37-39, 41, 43, 45, 50, 52, 54, 56, 57, 59, 66 have been rejected; claims 16, 32, 33, 40, 42, 44, 46-49, 51, 53, 55, 58, 60-65 have been objected to.

RPS: ©703/308-2700  
9 August 2002--h-drive

*Robert P. Swiatek*  
ROBERT P. SWIATEK  
PRIMARY EXAMINER  
ART UNIT ~~333~~ 3643